

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte EIICHIRO NAKAZONO and AKITOMO YAMASHITA

Appeal No. 2002-0500
Application No. 09/258,320

ON BRIEF

Before KRASS, FLEMING, and BARRY, *Administrative Patent Judges*.
BARRY, *Administrative Patent Judge*.

DECISION ON APPEAL

A patent examiner rejected claims 1, 5-11, 14-20, 24-26, and 32-39. The appellants appeal therefrom under 35 U.S.C. § 134(a). We affirm-in-part.

BACKGROUND

The invention at issue on appeal is a fan for cooling a semiconductor device. Figures 7 and 8 of the appellants' specification show a conventional such fan. (Spec. at 1.) In the conventional fan, a housing 141 having an open side and a cup-shape is protrusively formed on a recess of a frame 101. The housing secures a sleeve 105.

A rotary shaft 109 extends through, and is as rotatably supported by, the sleeve. (*Id.* at 1-2.) A fan 108 is mounted to the shaft 109.

The sleeve features dynamic-pressure-generating grooves 113. Oil 114 is provided to the grooves to lubricate the sleeve and the shaft. (*Id.* at 2.) A stopper washer 110 mounted to the rotating shaft prevents the fan from "coming off from the bearing." (*Id.* at 3.) A thrust sheet 107 and a thrust plate 106 are fixedly press-fitted into the frame to support the shaft axially. The appellants explain that when changes in temperature produce a gap between the thrust plate and the frame, oil spills therefrom. (*Id.*) Because the thrust plate is separate from the frame, they add, "the flatness of the bottom face of frame 101 is difficult to improve, which reduces adherence between th[e] cooling device" and a semiconductor 300 to be cooled. (*Id.*)

Figures 1-3 of the appellants' specification show their cooling fan. In contrast to the aforementioned fan, the appellants use the bottom face of their frame housing 41 as a thrust supporter 70. (Appeal Br. at 2.) Because their thrust supporter is unitary with the bottom of the frame housing, the appellants assert, oil is prevented from leaking. (*Id.* at 3.) They add that the unitary formation improves flatness of the bottom face, thereby improving adherence between the cooling device and a semiconductor 300 to be cooled. (Spec. at 12.) The fan blades 8 of the appellants' cooling device

feature a step section 22. A bell mouth 19 overlays the step sections 22 to prevent the blades from coming off. (Appeal Br. at 3.)

A further understanding of the invention can be achieved by reading the following claim.

1. A motor comprising:

(a) a frame;

(b) a frame-housing provided on said frame;

(c) a stator secured on an outer wall of said frame-housing;

(d) a sleeve fit into said frame-housing;

(e) a thrust supporter unitary with a bottom face of said frame housing;

(f) a shaft supported by said thrust supporter at an end of said shaft, said shaft being inserted into said sleeve and rotatably supported by said sleeve;

(g) a rotor secured to said shaft;

(h) a magnet disposed on said rotor and opposite to said stator;
and

(i) oil provided in a space between said shaft and said sleeve;

wherein a dynamic-pressure-generating-groove for retaining oil and generating dynamic-pressure by relative rotation between said shaft and said sleeve is formed on one of an outer wall of said shaft and an inner wall of said sleeve.

Claims 1, 5-7, 9, 14, 18, 19-20, and 24-26 stand rejected under 35 U.S.C. § 103(a) as obvious over the appellants' admitted prior art ("AAPA") and U.S. Patent No. 5,610,462 ("Takahashi"). Claim 8 stands rejected under § 103(a) as obvious over AAPA, Takahashi, and Japanese Patent Application 05-141,411 ("Suzuki").¹ Claims 10, 11, 32, 36, and 37 stand rejected under § 103(a) as obvious over AAPA; Takahashi; and U.S. Patent No. 5,357,163 ("Minakuchi"). Claim 15 stands rejected under § 103(a) as obvious over AAPA; Takahashi; and U.S. Patent No. 5,940,268 ("Miyahara"). Claims 16, 17, and 38 stand rejected under § 103(a) as obvious over AAPA; Takahashi; and Japanese Patent Application 09-037,516 ("Mitsuyasu").² Claim 33 stands rejected under § 103(a) as obvious over AAPA, Takahashi, Minakuchi, and Miyahara. Claims 34, 35, and 39 stand rejected under § 103(a) as obvious over AAPA, Takahashi, Minakuchi, and Mitsuyasu.

OPINION

Our opinion addresses the claims in the following order:

- claims 1, 10, 14, 15, 18, 19, 32, 33, 36, and 37
- claims 5-7, 9, 11, 20, 24, 25, and 26
- claim 8
- claims 16, 17, 34, 35, 38, and 39.

¹A copy of a translation is attached; we will refer to it by page number.

²A copy of a translation is attached; we will refer to it by page number.

Claims 1, 10, 14, 15, 18, 19, 32, 33, 36, and 37

At the outset, we recall that claims that are not argued separately stand or fall together. *In re Kaslow*, 707 F.2d 1366, 1376, 217 USPQ 1089, 1096 (Fed. Cir. 1983) (citing *In re Burckel*, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979)). When the patentability of a dependent claim is not argued separately, in particular, the claim stands or falls with the claim from which it depends. *In re King*, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986) (citing *In re Sernaker*, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983); *In re Burckel*, 592 F.2d 1175, 1178-79, 201 USPQ 67, 70 (CCPA 1979)). Furthermore, "[m]erely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable." 37 C.F.R. § 1.192(c)(7).

Here, the appellants argue claims 1, 14, 15, 18, and 19 together. (Appeal Br. at 5-7, 10.) Rather than arguing the patentability of claim 10, they assert, "[c]laim 10 distinguishes over the combination of references for the same reasons as discussed above with respect to independent claim 1." (*Id.* at 10.) Rather than arguing the patentability of claims 32, 36 and 37, the appellants further assert, "[c]laims 32, 36 and 37 further distinguish over the references cited above for the reasons as discussed with respect to claim 1." (*Id.*) Rather than arguing the patentability of claim 33, they assert, "[c]laim[] 33 . . . patentably distinguish[es] over the various prior art references

discussed above for the same reasons as have been previously noted." (*Id.* at 11.)
Therefore, claims 10, 14, 15, 18, 19, 32, 33, 36, and 37 stand or fall with representative claim 1.

With this representation in mind, rather than reiterate the positions of the examiner or the appellants *in toto*, we address the two points of contention therebetween. First, the examiner finds, "Takahashi teaches a frame housing 10 with an [sic] thrust supporter integral with the bottom face." (Supp. Examiner's Answer at 5.) He explains, "[t]his limitation is CLEARLY shown in Takahashi figure 1 as the portion of frame 10 under the thrust bearing element 20. This feature is identical to the Applicant's [sic] disclosed thrust supporter 70 under the thrust bearing 7." (*Id.* at 8.) The appellants argue, "the portion under the thrust bearing 20 is not a thrust supporter, but forms part of the thrust bearing element holder 14, the thrust bearing element 20 clearly being the thrust supporter, i.e. the part responsible for supporting the thrust of the shaft, and supporting the shaft." (Appeal Br. at 7.)

"Analysis begins with a key legal question -- *what* is the invention *claimed*?" *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). In answering the question, "the Board must give claims their broadest

reasonable construction. . . ." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1668 (Fed. Cir. 2000).

Here, claim 1 specifies in pertinent part the following limitations: "a thrust supporter unitary with a bottom face of said frame housing; . . . a shaft supported by said thrust supporter at an end of said shaft. . . ." The claim does not require that the thrust supporting portion of the framer support the shaft directly. To the contrary, the specification discloses that the support is indirect, i.e., via another element.

Specifically, "[r]otary shaft 9 . . . is supported axially by thrust supporter 70 **via thrust sheet 7**. . . ." (Spec. at 10 (emphasis added).) Giving the representative claim its broadest, reasonable construction, the limitations require that the bottom face of a housing support a shaft indirectly or directly.

Having determined what subject matter is being claimed, the next inquiry is whether the subject matter would have been obvious. The question of obviousness is "based on underlying factual determinations including . . . what th[e] prior art teaches explicitly and inherently. . . ." *In re Zurko*, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966); *In re Dembiczak*, 175 F.3d 994, 998, 50 USPQ 1614, 1616 (Fed. Cir. 1999); *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995)).

Here, Takahashi teaches "a brushless motor for use in a fan." Col. 2, ll. 36. We find that the brushless motor includes a housing as "a dish-shaped bracket 10 whose aperture faces up." *Id.* at ll. 37-38. More specifically, "[t]he bracket 10 is provided with a bearing holder 12 in the form of a cylinder whose bottom end is closed, wherein the bearing holder 12 extends upward from the central portion of the bracket 10. A thrust bearing element holder 14 formed in the shape of a cylinder whose bottom end is closed is disposed on the bottom of the bearing holder 12." *Id.* at ll. 38-44. "A thrust bearing element 20 having a substantially cylindrical shape is fit into the thrust bearing element holder 14. . . ." *Id.* at ll. 54-55.

We further find that the bottom face of the reference's bracket indirectly supports a shaft. Specifically, Figure 1 of Takahashi shows that the bottom face of the bracket 10 supports the thrust bearing element 20. In turn, "the lower end of [a] rotating shaft 56 is supported in the axial direction by the upper face of the thrust bearing element 20." Col. 6, ll. 6-8. Because the bottom face of the bracket supports the thrust bearing element, and the thrust bearing element supports the thrust of the rotating shaft, the bottom face of the bracket supports the thrust of the rotating shaft indirectly, i.e., via the thrust bearing element.

Second, the examiner finds, "it would have been obvious to a person skilled in the art at the time of the invention to construct the frame-housing of AAPA with the integral thrust supporter on the bottom face, as taught by Takahashi, to reduce the number of components during assembly of the fan motor." (Supp. Examiner's Answer at 10.) The appellants argue, "there is not explicit of teaching of reducing the number of parts. The number of parts in Takahashi may, with respect to this particular arrangement, be fewer, but it is far from clear that this would be obvious, given the necessity for the specific mounting arrangement provided by Takahashi, which seems more complicated and difficult to manufacture." (Reply Br. at 2.)

"The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact." *In re Gartside*, 203 F.3d 1305, 1316, 53 USPQ2d 1769, 1776 (Fed. Cir. 2000) (citing *In re Dembiczak*, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)). "[T]he question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *In re Beattie*, 974 F.2d 1309, 1311-12, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992) (quoting *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984)). "[E]vidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or,

in some cases, from the nature of the problem to be solved. . . ." *Dembiczak*, 175 F.3d at 999, 50 USPQ2d at 1617 (citing *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996); *Para-Ordnance Mfg. v. SGS Imports Int'l, Inc.*, 73 F.3d 1085, 1088, 37 USPQ2d 1237, 1240 (Fed. Cir. 1995)).

Here, we find that evidence of a suggestion, teaching, or motivation to combine flows from the prior art references and the knowledge of one of ordinary skill in the art. We agree with the examiner's finding that constructing the frame-housing of AAPA with a unitary thrust supporter on its bottom face would have reduced the number of components during assembly of the fan motor. (Supp. Examiner's Answer at 10.) More specifically, two of the AAPA's components, viz., its "thrust plate 106 and thrust sheet 107," (Spec. at 1-2), would have been replaced by a single component from Takahashi, viz., the reference's thrust bearing element 20.

For their part, the appellants do not contest that "[t]he number of parts in Takahashi may, with respect to this particular arrangement, be fewer," (Reply Br. at 2), but merely opine that the entire mounting arrangement of Takahashi "seems more complicated and difficult to manufacture." (*Id.*) "What appellants overlook is that it is not necessary that the inventions of the references be physically combinable to render obvious the invention under review." *In re Sneed*, 710 F.2d 1544, 1550, 218 USPQ

385, 389 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. United States*, 702 F.2d 1005, 1013, 217 USPQ 193, 200 (Fed. Cir. 1983); *In re Andersen*, 391 F.2d 953, 958, 157 USPQ 277, 281 (CCPA 1968)). See also *In re Nievelt*, 482 F.2d 965, 968, 179 USPQ 224, 226 (CCPA 1972) ("Combining the teachings of references does not involve an ability to combine their specific structures."). The test for obviousness is not whether the features of a reference may be bodily incorporated into the structure of another reference but what the combined teachings of those references would have suggested to one of ordinary skill in the art. *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

Here, combining teachings of AAPA and Takahashi does not require bodily incorporating the entire mounting arrangement of the latter into the structure of the former. Takahashi is relied on only to disclose that the bottom face of a housing may be used to support a shaft indirectly. The appellants' argument overlooks "the relevant combined teachings of the references. . . ." *Andersen*, 391 F.2d at 958, 157 USPQ at 281. Therefore, we reverse the obviousness rejection of claim 1 and of claims 10, 14, 15, 18, 19, 32, 33, 36, and 37, which fall therewith.

Claims 5-7, 9, 11, 20, 24, 25, and 26

The appellants argue claims 5, 6, 7, 9, 20, and 26 together. (Appeal Br. at 8-9, 10.) Rather than arguing the patentability of claim 11, they assert, "[c]laim 11 . . . distinguishes for the further reasons discussed above." (*Id.* at 10.) The appellants do not separately argue the patentability of claims 24 and 25. Therefore, claims 6, 7, 9, 11, 20, 24, 25, and 26 stand or fall with representative claim 5.

With this representation in mind, we address the two points of contention between the examiner and the appellants. First, the examiner finds, "Takahashi clearly teaches a groove between the ribs 26 which extends the length of frame 12. . . ." (Supp. Examiner's Answer at 10.) The appellants argue, "[w]hat is created between the space between the protrusions is not a groove, but simply a semi-cylindrical space. A groove is defined as 'a long, narrow furrow or channel.' Clearly the semi-cylindrical space 36 created by the protrusions 26 is not narrow, but a wide area." (Appeal Br. at 8.) The examiner responds, "the semi-circular area is a groove." (Supp. Examiner's Answer at 10.)

Turning to Takahashi, the semi-circular area in question "is [an] outer space 36 between the inner wall of the bearing holder 12 and the outer wall of the outer cylindrical layer 34a except for supporting portions 26a." Col. 3, ll. 59-62. Figure 2, "a

plan view illustrating a bearing holder of the brushless motor," col. 2, ll. 6-7, shows the outer space as element 36. Because the outer space 36 stretches from one supporting portion 26a to another supporting portion 26a, fig. 2, we find that the outer space is long in that direction. Because the width of the outer space 36 between the inner wall of the bearing holder 12 and the outer wall of the outer cylindrical layer 34a is small, we find that the space is narrow in that direction. Therefore, we find that the reference's outer space 36 is a long, narrow furrow or channel, i.e., a groove.

Second, the examiner finds, "Takahashi teaches a rib 58 having a smaller diameter than the frame housing is formed around the mounting section of the rotor." (Supp. Examiner's Answer at 5.) The appellants argue, "the rib does not block oil that is splashed from the space between the shaft and the sleeve, because this is already done by the oil seal 45." (Appeal Br. at 9.) The examiner further finds, "[i]t is inherent that the rib 58 helps to block oil from splashing out from the gap between the shaft and the sleeve." (Supp. Examiner's Answer at 5.)

"In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves. . . ." *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331, 59 USPQ2d 1401, 1406 (Fed. Cir. 2001) (citing 35 U.S.C. § 112, ¶2). "Moreover, limitations are not to be read into the claims

from the specification." *In re Van Geuns*, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)).

Here, claim 5 specifies in pertinent part the following limitations: "a rib formed around said mounting section of said shaft on said rotor." The claim does not require that the rib block oil splashed from between a shaft and a sleeve. Giving the representative claim its broadest, reasonable construction, the limitations merely require a support formed around a mounting section of a shaft.

Turning to the prior art, Takahashi discloses that "[t]he base portion of the rotating shaft 56 is supported by the boss 58 of the rotor frame 52." Col. 5, ll. 16-17. Because the boss supports the rotating shaft, we find it to be a rib. Figure 1 of the reference, moreover, shows that the boss 58 of the rotor frame 52 is formed around a mounting section of the rotating shaft 56.

Assuming *arguendo* that claim 5 did require that the rib block oil splashed from between a shaft and a sleeve, we find that Takahashi's boss 58 would block any oil splashed from between the reference's rotating shaft and its "oil-impregnated sleeve bearing (radial bearing) 34. . . ." Col. 3, ll. 41-42. For its part, the oil-impregnated

sleeve "comprises an outer cylindrical layer 34a having a relatively great length and two inner cylindrical layers 34b each having relatively small lengths wherein one of inner cylindrical layers 34b is disposed on the inner wall of the upper end portion of the outer cylindrical layer 34a and the other one is disposed on the inner wall of the lower end portion of the outer cylindrical layer 34a." *Id.* at ll. 42-49. Figure 1 of the reference shows that the boss 58 is positioned above a space between the oil-impregnated sleeve 34 and the rotating shaft 56. Because the boss 58 is positioned above the space, fig. 1, it necessarily would block any oil splashed from the space.

Figure 1 also shows the oil seal 45 mentioned by the appellants. More specifically, "[a] ring-shaped oil seal 45 made of felt is disposed on the oil-impregnated sleeve bearing 34 in such a manner that the lower face of the oil seal 45 is in contact with the upper face of the oil-impregnated sleeve bearing 34, that is, with the upper faces of the outer and inner cylindrical layers 34a and 4b." Col. 4, ll. 34-39. Although the seal is designed to absorb oil, col. 6, l. 18, we have no reason to believe that it is free from all imperfection. Furthermore, one of ordinary skill in the art would know that seals deteriorate over time. Such imperfection or deterioration would eventually allow oil to leak therethrough. Because the boss 58 is positioned above the oil seal 45, fig. 1, however, we find that any such leakage would be blocked by the boss. Therefore, we

reverse the obviousness rejection of claim 5 and of claims 6, 7, 9, 11, 20, 24, 25, and 26, which fall therewith.

Claim 8

We address the point of contention between examiner and the appellants. Admitting that neither AAPA nor Takahashi teaches a "sleeve having an end which is smaller than the inner diameter of the rib and flares out to the outer wall of the sleeve," (Supp. Examiner's Answer at 5), the examiner asserts, "[i]t would have been obvious to a person skilled in the art at the time of the invention to construct the motor of AAPA and Takahashi with the sleeve having an end which is smaller than the inner diameter of the rib and flares out to the outer wall of the sleeve because Suzuki teaches the sleeve can be used to help to keep the rotor from flying off of the stator." (*Id.* at 5-6.) The appellants argue, "[i]t does not appear from Suzuki that there is any embodiment in which the sleeve end flares outwardly to the outer wall of the sleeve, with the sleeve end having an outer diameter adjacent to rotor smaller than an inner diameter of the rib." (Appeal Br. at 10.)

Turning to the prior art, Suzuki explains that an "elastic body 20 (i.e., a projected member) is fixed onto the rotational shaft 1. . . ." Suzuki Translation, p. 5. "To fit the rotational shaft 1, as shown in Figure 2, the elastic body 20 is fitted into the concave

part 21, which is formed by the outer cylinder 5 and the sleeve 2, by deformation of the tip part 22 of the elastic body which is pressed-in and fixed onto the rotational shaft: 1, when the tip part 22 hits the projected part 23 of the outer cylinder 5. . . ." *Id.* at 5-6.

The Figure also shows that the elastic body 20 is fitted into the concave part 21. We agree with the examiner that "Suzuki clearly shows in Figures 1 and 2, that the sleeve bearing 2 includes a smaller diameter portion which flares out inside a rib on the rotor at 21." (Supp. Examiner's Answer at 10.)

The arrangement of an elastic body 20 and a flared sleeve 5 secures the rotational shaft and the fan blades attached thereto. Specifically, "[i]n the state in which the system is assembled, . . . there is no danger that the rotational shaft 1 can be more than necessarily lifted to draw air into lubricating oil or the rotational shafts 1 can be slipped off of the sleeve 2." (*Id.* at 6.) Such an advantage points toward combining the arrangement with AAPA and Takahashi.

However, we "must consider the passages and references which point away from the invention as well as those said to point toward it." *General Tire & Rubber Co. v. Firestone Tire & Rubber Co.*, 349 F.Supp 345, 359, 174 USPQ 427, 445 (N.D. Ohio 1972). "A reference teaches away impliedly when a modification or combination would render inoperable the invention disclosed in the reference." Lance Leonard

Barry, *Teaching A Way Is Not Teaching Away*, 79 J. Pat. & Trademark Off. Soc'y 867, 872 (1997).

Here, combining Suzuki's arrangement of an elastic body and a flared sleeve with AAPA and Takahashi would necessitate removal of the latter's boss. Because the boss supports "[t]he base portion of the rotating shaft 56" of Takahashi, col. 5, ll. 16-17, replacement thereof by Suzuki's elastic body would render Takahashi's invention inoperable. We are unpersuaded that such a combination would have been obvious. Therefore, we reverse the obviousness rejection of claim 8.

Claims 16, 17, 34, 35, 38, and 39

The appellants argue claims 16, 17, and 38 together. (Appeal Br. at 11.) Rather than arguing the patentability of claims 34, 35, and 39, they assert, "[c]laims . . . 34, 35 and 39 patentably distinguish over the various prior art references discussed above for the same reasons as have been previously noted." (*Id.*) Therefore, claims 17, 34, 35, 38, and 39 stand or fall with representative claim 16.

With this representation in mind, we address the point of contention between the examiner and the appellants. The examiner finds, "Mitsuyasu teaches a fan with a step section overlaid by the housing 18. Mitsuyama [sic] shows the outer diameter of the

step section in the fan being larger than the inner diameter of the bell mouth 18."

(Supp. Examiner's Answer at 7.) The appellants argue, "Mitsuyasu does not have a bellmouth." (Appeal Br. at 11.)

Claim 16 specifies in pertinent part the following limitations: "a bell mouth is provided on the side wall of said frame overlying an outer edge of said fan; and wherein a step section is provided on an outer edge of said fan, said bell mouth overlying said step section." Giving the representative claim its broadest, reasonable construction, the limitations require a step section on an outer edge of a fan and a member overlaying the step section.

Turning to the prior art, we find that Mitsuyasu discloses a step section on an outer edge of a fan as a concave "step part (17) . . . formed at the outside part at the upper edge of the fan (16)." Mitsuyasu Translation, p. 7. We further find that a member overlays the step part. Specifically, "[t]his concave step part (17) is positioned below [a] fan slip-off stopper member (12)." *Id.* Shaft (3) of the rotor (2) does not slip-off from the sleeve (4) since the fan (16) contacts the fan slipoff stopper member (12). *Id.* at 8. Therefore, we affirm the obviousness rejection of claim 16 and of claims 17, 34, 35, 38, and 39, which fall therewith.

CONCLUSION

In summary, the rejections of claims 1, 5-7, 9, 10, 11, 14-20, 24, 25, 26, and 32-39 under § 103(a) are affirmed. The rejection of claim 8 under § 103(a), however, is reversed. "Any arguments or authorities not included in the brief will be refused consideration by the Board of Patent Appeals and Interferences. . . ." 37 C.F.R. § 1.192(a). Accordingly, our affirmance is based only on the arguments made in the briefs. Any arguments or authorities not included therein are neither before us nor at issue but are considered waived. No time for taking any action connected with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED-IN-PART

ERROL A. KRASS
Administrative Patent Judge

MICHAEL R. FLEMING
Administrative Patent Judge

LANCE LEONARD BARRY
Administrative Patent Judge

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